# CLAIMS

1. A method of manufacturing a phase shift mask having, on a transparent substrate, a main opening formed by partly removing a light-shielding film and an auxiliary opening provided at a peripheral portion of said main opening, wherein the transparent substrate is partly removed in a depth direction such that phases of light passing through the main opening and light passing through the auxiliary opening differ from each other by a predetermined angle, comprising:

a first process including

a step of preparing a photomask blank having the light-shielding film, a thin film for forming an etching mask layer, and a first resist film which are formed in this order on the substrate,

a step of exposing a pattern corresponding to the main opening and the auxiliary opening onto the first resist film and then developing to form a first resist pattern,

a step of, using said first resist pattern as a mask, etching the thin film to form the etching mask layer,

a step of, using the etching mask layer as a mask, etching the light-shielding film, and

a step of stripping the remaining first resist pattern,

a second process including

a step of forming a second resist film on the substrate obtained in the first process,

a step of exposing a pattern corresponding to one of the main opening and the auxiliary opening and then developing to form a second resist pattern,

a step of, using the second resist pattern as a mask, etching part of the transparent substrate to a depth such that the phases of the light passing

through the main opening and the light passing through the auxiliary opening differ from each other by the predetermined angle, and

a step of stripping the remaining second resist pattern, and

a third process including a step of removing a required part of or whole of the etching mask layer in the substrate obtained in the second process.

2. A phase shift mask manufacturing method according to claim 1, wherein:

the light-shielding film is made of a material that is etchable by a fluorine-based etching medium and the light-shielding film is etched by the fluorine-based etching medium.